DARBY. (J. T.)

Extra-Uterine pregnancy.

EXTRA-UTERINE PREGNANCY.

Case of Extra-Uterine Pregnancy. By JOHN T. DARBY, M. D., *Professor of Anatomy and Surgery in the University of South Carolina, Columbia.**

In presenting to the Association this beautifully mounted skeleton of an extra uterine fœtus, and in giving the history of this interesting specimen, permit me to acknowledge my indebtedness to Dr. Addy, who was in charge of the mother, and to my friend, Dr. Lewie, of Lexington, who, as consulting Surgeon, performed the operation for delivery.

It is not my object to enter into the details of the several varieties of extra uterine pregnancy, as related in standard works on Obstetrics, in which the causes, effects, results and conditions incidental to this state are treated; I would, however, say to those especially interested in this subject, that the classical monograph of Campbell affords a vast fund of information, and can be consulted with profit. Such pregnancies as this specimen represents are always full of interest, and today the unusual occurrence of three cases, illustrating two forms of extra uterine fœtation, are brought before the members. An opportunity for the consideration of this subject, as presented by the three cases, has never before occurred to this Association, and, I may add, is seldom realized by any Medical Society at a single meeting.

I have listened with pleasure to the case reported by Dr. Evans, of Anderson, as showing a result in which nature was adequate, by a slow and painful process of ulceration into the rectum, to make an outlet, through which, in detached portions, an entire fœtus was expelled, and at the same time the life of the mother was preserved. The specimen which Dr. Gibbes presents, and the report which he submits, is of that rare variety, (*interstitial uterine pregnancy*,) in which nature is inadequate to the development of the fœtus, and which always terminates in the death of the mother. The report which I give is of that variety known as *abdominal fœtation*, in which surgical interference promises more than in any of the four recognized forms, and although in this case operative measures were adopted for the preservation of the life of the mother, death was the unfortunate result, and from notes furnished by the physicians in charge, I herewith give the history:

*Upon presenting this case, Dr. Darby was requested to write out his remarks for publication in Transactions of Medical Society.—*Chairman of Committee on Publication.*

On February 21st, 1861, Dr. Addy visited Rachel, a negro, about thirty-four years old, who had given birth to five living children; she was suffering from labor pains, and was supposed to be seven months advanced in pregnancy. The os tincæ were found to be natural, and as there was no tendency to dilitation, anodynes were given to prevent a miscarriage, and rest in bed enjoined for several days. Similar symptoms again occurring on the 22d of Feb., 1861, Dr. A. was called to visit Rachel, and after awaiting some hours the dilitation of the os he returned home, requesting that he should be sent for when labor was further advanced. Several weeks passed by before Dr. A. again saw his patient, and as there was a positive denial on the part of the woman and her friends that delivery had taken place, he believed that some fraud or deception had been practiced upon him. As the woman was attending to her usual duties on the farm of her mistress, no special examination was made at this visit.

On the 4th of February, 1867, Dr. A visited Rachel and delivered her of a strong and finely developed girl. After the delivery, an enlargement, filling the right side, was noticed, and was believed to be an ovarian tumor. Rapid recovery followed the labor, and in twenty months afterwards, on the 1st day of October, 1868, Rachel was delivered of a perfectly formed boy of good size, and of fair health and strength. This last labor, unlike that which had preceded it, was followed by great soreness and pain in the lower part of the abdomen with much restlessness and high fever. The tumor, still existing after the birth of this second child, was supposed to be the cause of the bad symptoms presenting, and an alterative and sedative treatment was adopted during the period of attendance.

Four months subsequent to this last labor, at a visit, on the 30th of January, 1869, a large abscess was found over the site of the tumor; this was opened to the right of the median line, and a quantity of fetid pus was discharged. This discharge continued until the 20th of May, 1869, when through the orifice a cranial bone presented itself and a diagnosis was readily made. At this stage, Dr. Lewie was called in consultation, and an operation being agreed upon, he performed it in the following way: An incision eight inches in length was made, extending from the right of the umbilicus, and a little above it, to the crest of the ilium, and corresponding to the long diameter of the orifice, through which the bone was presenting. In the middle part of this

incision the abdominal muscles were, to some extent, destroyed by ulcerative action. Through the opening was delivered a male fœtus, contained in a cyst and partially decomposed. The cyst was attached firmly to surrounding organs, and separated the fœtus as it lay within it, from any contact with the viscera, to which it was itself united. The placenta floated in the cystic cavity, was partially decomposed, and weighed five ounces; and the umbilical cord much softened, was separated from the placenta, and measured in length five inches. On account of the altered condition of the cystic walls, the locality of attachment of the placenta could not be positively defined. Immediately on delivery of the cystic contents, the entire contents of the stomach emptied themselves into the cavity of the cyst, through a ragged, jagged opening, two inches in width. This orifice was situated on the anterior surface of the stomach, corresponding to a point about the middle of the greater curvature, and was at once closed with silk sutures. Despite all precautions to prevent the food making its way through this opening into the cystic cavity, it continued as fast as swallowed to pour from the stomach into the cyst, and the patient from starvation thus produced, died on the seventeenth day following the operation. There was an improvement in the general symptoms, shown in the relief from pain and by there being no fever, as had existed for several months prior to the operation. Dr. L. states that he never saw less constitutional irritation expressed, not so much as generally follows a natural delivery occurred, and "that it is his belief, that could food have been retained in the stomach the patient would have recovered."

It will be noticed from the history of this case, that from the first visit of Dr. A. to the birth of the girl, a period of six years and eighteen days elapsed; that there was an interval of twenty months between the birth of the boy and the previous labor when the girl was delivered; and that from the first visit, to the operation for the delivery of the extra uterine fœtus was eight years one month and twenty-nine days. If we agree with Dr. A., that at his first visit the woman was seven months advanced in pregnancy, then the whole period, from the time of conception to the removal of the fœtus, is nine years less three months. It is my opinion, however, that at the first visit the woman was five instead of seven months advanced in pregnancy, and that the labor pains occurring four months subsequently were those efforts which nature always sets up for the expulsion of the child at full

term, provided it be alive, whether it be within or *without* the uterus. If this view is correct, and it accords with the experience of those who have noted especially this variety of pregnancy, it follows that from conception to delivery covers a period of eight years and seven months, and shows a difference of two months between the calculation of Dr. A. and myself, which is of little moment. The period of retention of this specimen in its ventral bed is not remarkable when compared with some other reported cases, and yet it ranks high, for in seventy-five cases recorded by Campbell, showing that the period varied from three months to fifty-six years, I note that one* only was carried nine years. It is worthy of note, also, that during the period of retention two children, a boy and a girl, were born, and not until after the birth of the former did local or general symptoms of inflammation occur. After the natural delivery of the boy, on October 1st, 1868, great pain was experienced and an abscess formed on the site of the tumor; but up to that date the woman attended to her customary duties without complaint, and with not more difficulty than is usually incidental to the pregnant state. From October 1st, 1868, to the opening of the abscess, January 30th, 1869, and even up to the delivery of the fœtus on May 20th, 1869, there was continuous pain, producing, with the suppuration and ulcerative action following, much constitutional disturbance. The extraction of the fœtus forthwith lessened these conditions, and but for the unfortunate rent in the stomach, the operation would probably have been crowned with success. It is due to the physician who performed the operation to state that the orifice in the stomach was produced by ulceration. Adhesions bound the cyst to surrounding organs, and after the opening of the abscess through the abdominal wall, atmospheric influence at the point where the cyst and stomach were united, had produced a weak part by inflam-

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* Note.—*Retention in 75 Cases, by Campbell.*

Fœtus retained 3 months in 2 instances, 4 months in 1, 5 months in 1, 9 months in 2.

Fœtus retained 15 months in 3 instances, 16 months in 2, 17 months in 2, 18 months in 7,

Fœtus retained 1 year in 5 instances, 2 years in 8, 3 years in 7, 4 years in 4.

Fœtus retained 5 years in 1 instance, 6 years in 2, 7 years in 3, 9 years in 1.

Fœtus retained 10 years in 3 instances, 11 years in 2, 13 years in 1, 14 years in 2.

Fœtus retained 16 years in 1 instance, 21 years in 1, 22 years in 1, 26 years in 2.

Fœtus retained 28 years in 1 instance, 31 years in 1, 32 years in 1, 33 years in 1.

Fœtus retained 35 years in 2 instances, 48 years in 1, 50 years in 1, 52 years in 1.

Fœtus retained 55 years in one instance and 56 years in one other.

matory action, which gave way on the extraction of the fœtus.

At times, falls and blows are the exciting causes of inflammation in cysts of this nature, and we have as an end in some cases, ulceration, bringing about a communication between the cavity of the cyst and surrounding parts. Violent muscular exertion, such as witnessed in labor, and as sometimes is seen in vomiting, coughing, and defecating, act as exciting causes for producing a similar condition. Causes accidental and natural, as described, can, when put into operation, produce inflammation in a cyst containing a fœtus, where for years no such effects arising, little or no inconvenience other than the size of the tumor is experienced. The physical formation of certain parts of the fœtus, as the angularity of the knee and elbow, compared with the rotundity of the shoulder and buttock, would, under pressure, act differently in exciting inflammation of the cyst. The communication made by ulcerative action, between the cyst and other organs, may or may not prove beneficial, according to the organ involved. Thus in the case of a communication existing between the sac and stomach, death would be the inevitable consequence; and so, too, if there was communication with the small intestines. An ulceration from the sac through the coecum, would, in all probability, end in death, on account of the long tract for the passage of head bones; and so, too, the most serious consequences arise, whenever the sac and bladder communicate. In the case reported by Dr. Evans, we have an example, in which the ulceration from the cyst cavity into the rectum, proved beneficial. May it not be that in cases similar to this, where the fœtus has been expelled piecemeal through the rectum and the life of the mother preserved, that the pressure of the head upon the rectum, in its bony site, from violent efforts of the diaphragm and abdominal muscles, in various natural functions, cause this to be one of the most frequent outlets for the delivery of the extra uterine fœtus? The cause of inflammatory action in the case of Rachel, was evidently due to the muscular efforts during her last labor. To the time of this labor no pain had been experienced in the tumor for seven years—that is from the date when nature endeavored to expel the misplaced fœtus, to the delivery of the boy on October 1st, 1868. Immediately following that labor, great pain commenced in the lower part of the abdomen, and serious constitutional disturbance existed from the formation of an abscess directly over the left parietal bos, as

the discoloration from exposure through the abdominal opening is plainly marked on that bone of the specimen exhibited. Nature endeavored to give relief through the abdominal walls, a mode in which recorded cases show singular and remarkable instances of the total expulsion of the fœtus, the closing of the cyst, the healing of the outlet, and the recovery of the mother. The process is slow at such times, and the continuous drain from suppuration and decomposition of the cystic contents, render it obligatory in all cases where such conditions arise, to assist nature in the delivery of the fœtus, as affording a better chance for life, and giving comfort by relief from the fetid discharges. In this case, provided the fœtus was not attached to the cystic wall by adhesions, which at times exist, and had the operation for delivery been performed when the abscess was opened, or at least before atmospheric influence had changed the cystic walls by inflammatory action, the weak point in the stomach which gave way might not have occurred, and the life of the mother might have been preserved.

I beg the indulgence of the members to express my views briefly, in regard to operating in certain cases of extra uterine pregnancy. In that variety known as *tubal fœtation*, could it positively be determined that this state existed, operative measures for the extraction of the fœtus, would, in my opinion, be legitimate. In from three to five months, by rupture of the sac, death must ensue at once from hemorrhage or from the peritoneal inflammation resulting, so that an operation for relief would not be more hazardous than when performed for extirpation of fibro-cystic and pylo-cystic growths of the broad ligament, or for solid tumors of the ovary and uterus. The impossibility by any means yet known for positively determining *tubal pregnancy* excludes the knife before rupture of the sac, and subsequent to this condition, from the rapidly fatal consequences of hemorrhage, one could hardly be in time by an operation to give a chance for life. In the *interstitial variety*, of which Dr. Gibbes shows such a beautiful specimen, the same objections arise as have been given in the *tubal form*, with perhaps the greater difficulty of diagnosis added. In these two varieties, unless the fœtus dies at a very early age and becomes encysted, death is almost certain, as statistics show that in 100 cases reported, 98½ per cent. represents the death rate.

The *ovarian variety* involves great difficulties in diagnosis in the early stages, but the opportunity for judging this

condition by auscultation could be more readily done than in either the *tubal* or *interstitial* forms: for the fœtus generally reaches an age in which the action of the heart could be determined. As death is the result, as a rule, in this variety, as in the other two, and from similar causes, there would be to my mind less danger to life to perform ovariotomy, than to await the chances of some happy circumstance, which might cause the fœtus to be innocuous. In the constant improvement we may see almost daily, for performing the operation of ovariotomy as well as in the subsequent treatment, there is no ground for objecting to this measure as a mode for preserving life in this variety of extra-uterine pregnancy.

The *abdominal variety* presents the most favorable form for diagnosis and for treatment. The fœtus often develops to full size and can be distinguished in its outline through the abdominal walls; by digital examination in the rectum and the vagina certain parts at times are readily recognized and a diagnosis is made easy; the fœtal heart sends forth its natural sounds and marks this tumor distinctly from those of a different nature. Should the fœtus grow to the full term of gestation, the pangs of labor come on as when carried in the womb; with no outlet in its misplaced home, it dies and may light up an inflammation in a little while, disastrous to the mother, or it may remain for years, giving no pain, doing no harm, and in nowise endangering life. There is no doubting what should be done when the expulsion of the fœtus is about to take place through certain parts, as the rectum or the abdominal walls; all will agree, that the slow process by which nature attempts to relieve the mother, from mere tediousness and attendant effects, the vital powers would be worn away, and as a relief, the surgeon should give a helping hand. Should operative measures be used prior to a manifestation by suppuration or ulceration as an outlet for the fœtus? This is a point of grave importance and difficult to decide. Whenever the fœtus is dead and no symptoms of irritation are shown, it would be absolute recklessness to do otherwise than leave it undisturbed. When the living fœtus is giving pain prior to the full term of gestation, and exciting apprehension that even more serious consequences might result in the efforts to dislodge itself from the sac, I would unhesitatingly advise that galvano-puncture needles be inserted through the cyst and, as did Bachetti, of Pisa, take its life away, by passing a galvano-electric current. Should the full term of gestation be allowed

when we have such an important aid as galvanism to prevent it? The situation could be no worse after the death, and by legitimately taking the life of the fœtus, it might be that all bad symptoms would cease and the mother enjoy life for many years.

There are certain circumstances in which it appears to me that gastrotomy is advisable, and in presenting them for consideration, I well know the views of some high obstetrical authorities opposed to them. The experience which has been obtained through ovariotomy within the last ten years, especially teaches that the fears which have been expressed against opening the peritoneal cavity, do not longer weigh against this operation. The mortality in degree to the magnitude of the operation, is not so great as among some of the capital operations where no serous membrane is involved; moreover, the antiseptic method now adopted for treating the peritoneal cavity subtracts greatly from the dangers incidental to the operation of gastrotomy for any purpose for which this operation may be required—be it performed, for disease of the womb and its appendages, or for the extraction of the fœtus within or without the uterus. The rarity of extra uterine pregnancy as compared with other conditions for which gastrotomy is now often undertaken renders our experience limited, and the dread entertained by the majority of authors on this subject, causes them to state that the life of the mother is more endangered by extraction of the fœtus, than by leaving it to the operations of nature. It must be admitted that, to a great extent, this view is true, when, from statistical information, we compare the cases in which operations *have* or *have not been* performed, but marked changes in the last ten or twelve years for treating tumors by abdominal section now exist, and, in my opinion, former dangers are so much lessened as to legitimize operations for the delivery of the extra uterine fœtus, under the following circumstances: 1st. When rupture of the cyst has taken place, and rapidly fatal consequences do not follow from hemorrhage. 2d. When after awaiting the death of the fœtus, or after killing it by galvano-electric puncture as proposed, should symptoms supervene which endanger life. 3d. When, at the full term of gestation, the child is known to be alive.

In the last condition the operation should be undertaken for the preservation of both the mother and the child. Further, does not nature show us in many recorded cases, where the fœtus has obtained an outlet by ulcerative action

through certain parts, that the life of the mother is sometimes preserved? It does seem that the surgeon might imitate her in this action for relief, especially, when through the abdominal parietes adhesive inflammation could, by caustic applications, bind the peritoneum with the cyst to the point selected as an outlet for extraction of the fœtus, and not more danger be incurred, than when hydatid cysts of the liver are emptied by similar treatment. Might it not be, too, that in the abdominal variety of extra uterine pregnancy, when the period of gestation is almost at an end, by bringing about adhesive inflammation between the cyst, peritoneum and abdominal walls, the fœtus could be delivered alive, and the life of the mother be in no more danger than when nature delivers it dead? Should this mode for delivery not be adopted, and the knife instead, by direct incision, be used for entering the cystic cavity, the fœtus, unless bound to the walls of the sac, should at once be extracted. If alive, adhesions would not probably be found; and, if dead, a few days atmospheric influence would soon detach the fœtus, and permit it to be taken away. The placenta should never be removed so long as found attached; the cord should be cut close to the placenta and securely tied with two stout ligatures, the ends of which brought out of the incision, would furnish a ready method for the drainage of the cyst. The same styptics as used during operations upon the womb and its appendages, when an abdominal incision is made, would here be advisable, and similar anti-septic measures for cleansing the cyst from putrescent matters, as are now adopted for treating the peritoneal cavity after ovariotomy.

It will be noticed, that the three cases reported to-day occurred in negroes, and in addition, I would mention a fourth, in which a negro slave of this city, passed piecemeal by the rectum an entire fœtus and subsequently lived for many years. The subject of extra uterine pregnancy is surrounded with difficulties on all sides and at every point; the causes and progress of this form of conception from beginning to end, is a field in many parts unexplored by the Physiologist and the Gynecologist; the production of elementary tissues microscopically perfect and of the various complex organs and of all that goes to compose the fœtal organism, as well as that retrograde metamorphosis which at one time will change the fœtus into a mass of fatty matter, and at another, by calcification, make it as hard as stone, are alike wonderful to the Anatomist and Pathologist. The

effects of the several varieties of this abnormal type of pregnancy upon surrounding parts, the symptoms attendant, the terminations presented and the treatment to be adopted, are of scientific interest to each one of us; and when we examine the specimen now before us, and see that even the ossicles of the ear are not wanting to complete its perfection as an osseous whole, we can but recognize our weakness in the strength of those forces which nature at times conservatively sets up to give perfect form and life to man outside of his mother's womb.

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